

# City of Detroit

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TO: Councilmembers

FROM: Irvin Corley, Jr., Director *ICJ*  
Anne Marie Langan, Deputy Director *AML*

DATE: February 26, 2010

RE: A Report from the Research and Analysis Division on Municipal Health Care Costs

At the Public Health and Safety Standing Committee, the Research and Analysis Division submitted a report entitled "Municipal Health Care Costs". Council President Pro Tem Brown referred the report to our office and requested a report from our office.

We agree with RAD that their report should be referred to the Administration – the Mayor's Office, the Office of Restructuring and Human Resources as well as Labor Relations – so Council can get some feedback on what if anything is being considered. The Administration hired Mercer to revamp the healthcare plan's cost sharing structure, which has been implemented.

We would suggest that Council request a response from the Administration about whether the idea of instituting a wellness program was considered or analyzed when Mercer conducted its analysis. The Administration could also report if they currently conduct any type of wellness programs for employees and if this issue is being analyzed.

The attached article from Crain's Detroit, as well as the report from the Center for Healthcare Research and Transformation ([www.chrt.org](http://www.chrt.org)) based in Ann Arbor, suggest that employers and health care providers could do a better job offering prevention and early detection programs to reduce the higher than national average of hospital discharges due to cardiovascular disease, depression and back disorders in Michigan. These prevention programs would cost less than the hospital admissions that occur due to these conditions when they are not managed.

### Attachments

cc: Council Divisions  
Auditor General  
Shannon Holmes, Group Executive  
Labor Relations Director  
Kamau Marable, Mayor's Office

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8:00 pm, January 24, 2010

## Study: Better disease prevention programs needed Employers urged to help cut costs

By [Jay Greene](#)

A new study indicates that Michigan's employers and health care providers could do a better job offering prevention and early detection programs to reduce the state population's higher-than-average numbers of hospital discharges for cardiovascular disease, depression and back disorders, according to Ann Arbor-based **Center for Healthcare Research and Transformation**.

In one of the first reviews of its kind in the nation on the cost of disease, the center ranked the top 10 most frequent hospital discharges by diagnosis, gender and charges in Michigan and compared those to national averages.

The study is the second in a series of six issue briefs. The first brief, released in December, showed that Michigan's personal health spending has been growing at a slower pace over the past 10 years than the U.S. average.

"There is a lot of health care spending for things that are clearly preventable or where early intervention could make a difference," said center Director Marianne Udow-Phillips.

"No. 1 in spending on hospital care is on heart disease. We know a lot of heart disease is caused by smoking and obesity. There is a lot we can do to prevent cardiac admissions through prevention," Udow-Phillips said.

Heart disease accounted for over \$143 billion in health care spending in the U.S. and \$4.2 billion in Michigan in 2007, the center said. Total health spending in the U.S. amounted to \$2.2 trillion.

Dr. Tom Simmer, a center board member and chief medical officer with **Blue Cross Blue Shield of Michigan**, said the study will help bring awareness to chronic diseases that are driving up Michigan's health care costs.

"We have known for some while that chronic illness is a driver of costs. This represents a significant change where before we believed acute illness drove costs," Simmer said.

Udow-Phillips said the study could encourage employers to reduce health care costs by promoting employee assistance programs and possibly adding wellness programs to their insurance coverage options for workers.

Simmer said companies can use the report to "intelligently raise questions with insurers with health care delivery organizations as to what efforts are under way to affect these main cost drivers."

While hospitals and doctors in Michigan have taken steps to improve quality and reduce costs, Simmer said providers are challenged because smoking rates and obesity are higher in Michigan than

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nationally.

"Other states are moving more quickly to lower smoking prevalence than Michigan," he said. "Smoking and obesity are lifestyle factors that lead to a range of diseases, some of which can be preventable."

The center found that in Michigan more women, 16,000, are hospitalized for mood disorders than men, Udow-Phillips said.

Females in Michigan accounted for 57 percent of total mood disorder discharges, compared with 43 percent for men, the center said.

"We don't know why and are looking into it," she said. "We do know the data shows that the incidence of depression in women is higher. ... There is post-partum depression."

Udow-Phillips said employers could develop better systems to identify workers who exhibit signs of depression or mood disorders.

"Employers will want to encourage people to be diagnosed for depression to keep them out of the hospital," she said.

In Michigan, back disorders also accounted for 2.1 percent of discharges in 2007, ranking number nine on the top 10 list in Michigan, the center said. Back disorders accounted for 1.6 percent of all discharges nationally.

"Back surgery is a top 10 admission in Michigan. A lot of people are getting back surgery who would do just as well without surgery," Udow-Phillips said. "We need to have patients more involved in these decisions."

In 2007, total hospital spending on back disorders alone was almost \$26 billion in the U.S. and \$819 million in Michigan.

While the center found that Michigan's hospital charges are lower than national averages, the higher use of technology and possible overuse of such surgical services as angioplasty and back surgery could be driving up costs unnecessarily, Udow-Phillips said.

"We are doing more surgical intervention in Michigan," she said.

Angioplasty procedures, which are used to open narrowed or clogged blood vessels of the heart, could be higher in Michigan because of the availability of services, said Udow-Phillips.

"We have lots of cardiac programs, lots of surgeons, and the practice patterns that have been developed in the community over time to do more of them," she said.

Another driver of high medical costs is care for premature infant births. The average charge for low birth weight or premature birth is 14 times higher than that for a healthy infant birth: \$119,389 per discharge compared with \$7,182, the center said.

"This is an area we are looking at to initiate programs for improvement," Simmer said. "We are doing everything we can to improve prenatal care. There may be an opportunity to look at various forms of treatment for infertility, which sometimes led to underweight infants."

Udow-Phillips said one of the more surprising findings of the study was that the generic form of Vicodin was the most frequently prescribed drug nationally and in Michigan.

## LEADING ILLNESSES

Among Michigan's top 10 hospital discharges, here are some that rank higher than national averages:

(by percentage of total hospital discharges)

### 2. Congestive heart failure

Michigan: 2.9

U.S.: 2.6

### 4. Coronary artery disease

Michigan: 2.9

U.S.: 2.4

### 5. Degenerative joint disease

Michigan: 2.6

U.S.: 2.1

### 7. Mood disorders

Michigan: 2.2

U.S.: 2.0

### 8. Irregular heartbeat

Michigan: 2.1

U.S.: 1.9

Source: Center for Healthcare Research and Transformation

Alternative behavioral strategies to treat pain could be less costly and just as effective as medication, she said.

"We have a researcher (at the **University of Michigan**) who is convinced cognitive behavioral therapy can be an alternative pain treatment in some cases," Udow-Phillips said.

To see an electronic copy of the report, visit [www.chrt.org](http://www.chrt.org).

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# The Cost Burden of Disease

U.S. and Michigan



**T**here may be no broad consensus on the impact of recent health reform proposals on the growth of health care costs in the U.S., but few would dispute that rising health care costs are a threat to the U.S. economy, the health system, and the health and financial well-being of families and individuals in the United States. As we collectively seek ways to address the crisis of rising costs—as part of overall health reform or through regional, state, or local approaches—we must understand the factors that drive health care costs and where opportunities exist to affect those drivers.

In our December 2009 issue brief on health care spending, we looked at spending in the U.S. and Michigan by country, state, and payer to understand the scale and rate of growth in health care spending in the U.S., among states, and by public and private payers.

In this issue brief we present data that reveal the cost burden of disease: the most common reasons for hospitalization, the most expensive conditions, the costliest procedures, the costliest and most frequently prescribed prescription drugs. We also look at gender differences between men and women in the top ten diagnoses or each population at hospital discharge.

This issue brief on disease burden and the December 2009 issue brief on overall costs are part of a larger report on health care costs CHRT will publish in 2010, designed to stimulate thinking and further analysis about opportunities for change in health policy, medical practice—even personal health choices—that could lead to more effective and efficient overall health care spending.

The Center for Healthcare Research & Transformation (CHRT) sponsors research and public information to promote evidence based care delivery, improve population health, and expand access to care. Housed at the University of Michigan, CHRT is a partnership between U-M and Blue Cross Blue Shield of Michigan to test the best ideas for improving the effectiveness and efficiency of the health care system.

Visit CHRT on the Web at: [www.chrt.org](http://www.chrt.org)



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## Most Common Reasons for Hospitalization, U.S. and Michigan, 2007

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## Spending for Hospitalizations, U.S. and Michigan, 2007

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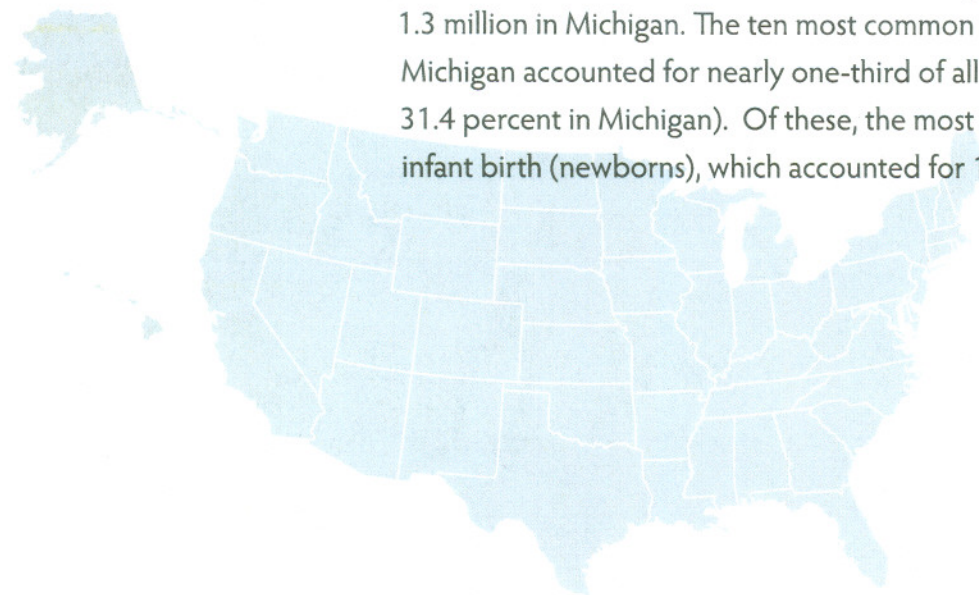
## Prescription Drugs, U.S. and Michigan, 2008

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## Diagnosis at Discharge

In 2007, there were almost 40 million discharges from the hospital in the U.S. and 1.3 million in Michigan. The ten most common inpatient diagnoses in the U.S. and in Michigan accounted for nearly one-third of all inpatient discharges (31.6 percent U.S., 31.4 percent in Michigan). Of these, the most common reason for hospitalization was infant birth (newborns), which accounted for 11.5 percent of all hospital discharges.



**Figure IB2.1: Top 10 Most Frequent Hospital Discharges by Diagnosis, U.S., 2007**

UNITED STATES			
Rank	Principal Diagnosis	Total no. of discharges	% of total no. of discharges
1	Liveborn (newborn infant)	4,542,685	11.5%
2	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	1,171,546	3.0%
3	Congestive heart failure, nonhypertensive	1,024,903	2.6%
4	Coronary atherosclerosis (coronary artery disease)	963,903	2.4%
5	Trauma to perineum and vulva	867,786	2.2%
6	Osteoarthritis (degenerative joint disease)	814,934	2.1%
7	Other complications of birth, puerperium affecting management of the mother (complications of childbirth)	810,430	2.1%
8	Nonspecific chest pain	788,447	2.0%
9	Mood disorders (depression and bipolar disorder)	774,256	2.0%
10	Cardiac dysrhythmias (irregular heartbeat)	731,468	1.9%



Aside from childbirth-related diagnoses, these data show that cardiovascular disease was the most common reason for hospitalization in 2007. Nationally, four of the top ten diagnoses related to cardiovascular disease (coronary atherosclerosis, congestive heart failure, chest pain, and cardiac dysrhythmias); in Michigan, three of the top ten (coronary atherosclerosis, congestive heart failure, and cardiac dysrhythmias).

Mental health disorders were also in the top ten diagnoses in both Michigan and nationally, accounting for approximately two percent of all discharges from the hospital in the U.S. and Michigan.

<sup>1</sup> Facts and Figures 2007 Healthcare Cost and Utilization Project (HCUP). September 2009. Agency for Healthcare Research and Quality, Rockville, MD.

**Figure IB2.2: Top 10 Most Frequent Hospital Discharges by Diagnosis, Michigan, 2007**

MICHIGAN			
Rank	Principal Diagnosis	Total no. of discharges	% of total no. of discharges
1	Liveborn (newborn infant)	122,272	9.5%
2	Congestive heart failure, nonhypertensive	37,791	2.9%
3	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	37,333	2.9%
4	Coronary atherosclerosis (coronary artery disease)	37,289	2.9%
5	Osteoarthritis (degenerative joint disease)	33,531	2.6%
6	Septicemia (except in labor)	28,878	2.2%
7	Mood disorders (depression and bipolar disorder)	28,111	2.2%
8	Cardiac dysrhythmias (irregular heartbeat)	27,258	2.1%
9	Spondylosis, intervertebral disc disorders, other back problems (disorders of intervertebral discs and bones in spinal column)	27,011	2.1%
10	Complication of device, implant or graft	24,992	1.9%

Sources: Healthcare Cost & Utilization Project (HCUP)



## Gender Differences

Excluding childbirth-related diagnoses, most diagnoses were common to both males and females.

Overall, while heart-related diagnoses were common among both men and women, they were more frequent for men. Four heart-related diagnoses (coronary atherosclerosis, congestive heart failure, non-specific chest pain, and cardiac dysrhythmias) were among the ten most common principal diagnoses for male hospitalizations. Congestive heart failure and coronary atherosclerosis were among the ten most common among females.

Heart attacks (acute myocardial infarctions) ranked as the fifth most common discharge diagnosis among males, but were not among the top ten discharge diagnoses for females (rank for women was 25th).

**Figure IB2.3: Top 10 Most Frequent Hospital Discharges by Diagnosis, Michigan Males at**

MALE—MICHIGAN			
Rank	Principal Diagnosis	Total discharges	% of total discharges
1	Liveborn	62,896	11.7%
2	Coronary atherosclerosis	22,992	4.3%
3	Congestive heart failure, nonhypertensive	18,204	3.4%
4	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	18,024	3.3%
5	Acute myocardial infarction	14,211	2.6%
6	Cardiac dysrhythmias	13,473	2.5%
7	Septicemia (except in labor)	13,326	2.5%
8	Osteoarthritis	13,002	2.4%
9	Spondylosis, intervertebral disc disorders, other back problems	12,875	2.4%
10	Complication of device, implant or graft	12,615	2.3%



Osteoarthritis (degenerative joint disease) was responsible for many more hospitalizations for females (498,199 discharges in the U.S.; 20,528 in Michigan) than for males (314,000 discharges in the U.S.; 13,002 in Michigan).

In the U.S. and in Michigan, women accounted for 57 percent of discharges for mood disorders, and men accounted for 43 percent.

In Michigan, mood disorders ranked seventh for females but was not among the top ten discharge diagnoses for males<sup>2</sup>.

<sup>1</sup> Facts and Figures 2007 Healthcare Cost and Utilization Project (HCUP). September 2009. Agency for Healthcare Research and Quality, Rockville, MD.

<sup>2</sup> The rank for men was 11<sup>th</sup>.

## males, 2007

FEMALE—MICHIGAN			
Rank	Principal Diagnosis	Total discharges	% of total discharges
1	Liveborn	59,312	7.9%
2	Trauma to perineum and vulva	22,089	3.0%
3	Other complications of birth, puerperium affecting management of the mother	22,060	2.9%
4	Osteoarthritis	20,528	2.7%
5	Congestive heart failure, nonhypertensive	19,586	2.6%
6	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	19,309	2.6%
7	Mood disorders	15,907	2.1%
8	Septicemia (except in labor)	15,551	2.1%
9	Other complications of pregnancy	14,604	2.0%
10	Coronary atherosclerosis	14,297	1.9%

Sources: Healthcare Cost & Utilization Project (HCUP)



# Per Discharge Spending—Highes

One important determinant of health care spending is the intensity of services provided during a hospital stay, often reflected in the charges per hospital discharge.

Conditions treated with more expensive technology or requiring intensive care—such as spinal cord injuries, heart valve disorders, cardiac and circulatory disorders, and leukemia—were among the top ten most costly diagnoses per stay in the U.S. and Michigan.

Nine of the top ten most costly diagnoses per hospital stay were the same for the U.S. and Michigan. However, in Michigan charges were consistently lower per hospitalization for all top diagnoses.

**Figure IB2.4: Top 10 Charges Per Discharge by Diagnosis, U.S., 2007<sup>3</sup>**

UNITED STATES			
Rank	Principal Diagnosis	Charges, \$ (mean)	Total Number of Discharges
1	Infant respiratory distress syndrome	\$138,224	11,399
2	Spinal cord injury	\$126,060	13,226
3	Short gestation, low birth weight, and fetal growth retardation (premature birth and low birth weight)	\$119,389	24,904
4	Heart valve disorders	\$116,751	90,667
5	Leukemias	\$114,488	43,544
6	Cardiac and circulatory congenital anomalies	\$101,412	39,532
7	Other central nervous system infection and poliomyelitis	\$87,702	8,557
8	Aortic, peripheral, and visceral artery aneurysms (ballooning or rupture of an artery)	\$83,897	84,852
9	Hodgkin's disease	\$82,435	5,597
10	Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	\$74,942	929

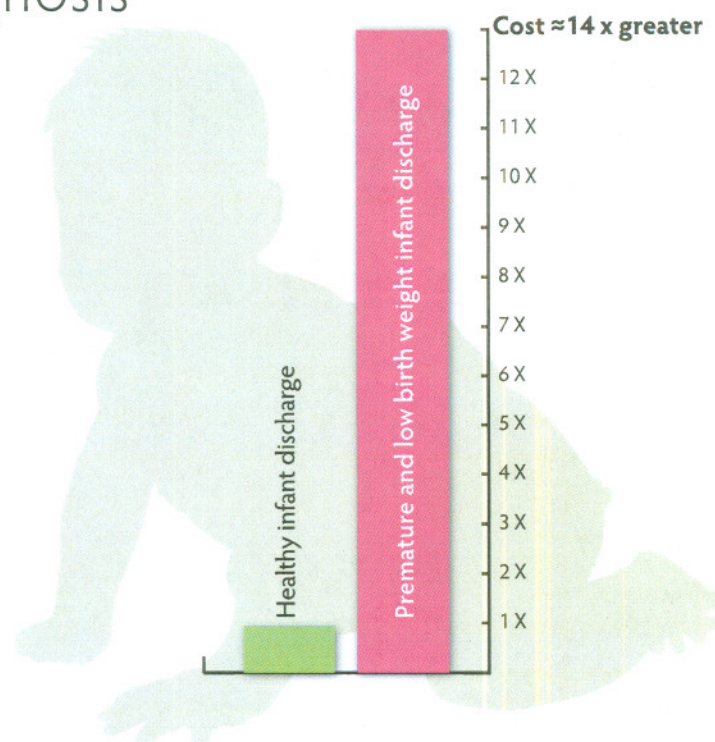


# Charges per Discharge by Diagnosis<sup>2</sup>

Among the most costly diagnoses per hospital stay in 2007 were those related to newborns. The average charge per discharge for premature birth and low birth weight was \$119,389 in the U.S. and \$102,103 in Michigan. This is approximately 14 times higher than the average charge of \$7,182 per discharge for a healthy infant birth in Michigan.

<sup>2</sup> Because of available data, information included in this report related to hospital spending is based on charges rather than actual payments by payers and consumers. Charges can be significantly higher than payments but the relative rankings should not be significantly affected.

<sup>3</sup> Hospital charges are the amounts usually seen by a patient when they receive their hospital bill. Charges seldom represent what is actually paid for hospital stays because of negotiated discounts, but they do offer a useful benchmark for comparing the relative costliness of conditions.



**Figure IB2.5: Top 10 Charges Per Discharge by Diagnosis, Michigan, 2007**

MICHIGAN			
Rank	Principal Diagnosis	Charges, \$ (mean)	Total Number of Discharges
1	Short gestation, low birth weight, and fetal growth retardation (premature birth and low birth weight)	\$102,103	465
2	Infant respiratory distress syndrome	\$99,247	246
3	Spinal cord injury	\$95,887	434
4	Cardiac and circulatory congenital anomalies	\$93,128	1,515
5	Heart valve disorders	\$88,630	3,034
6	Leukemias	\$87,346	1,386
7	Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	\$78,682	29
8	Immunity disorders	\$75,969	56
9	Aortic, peripheral, and visceral artery aneurysms (ballooning or rupture of an artery)	\$72,033	3,366
10	Other central nervous system infection and poliomyelitis	\$71,254	323

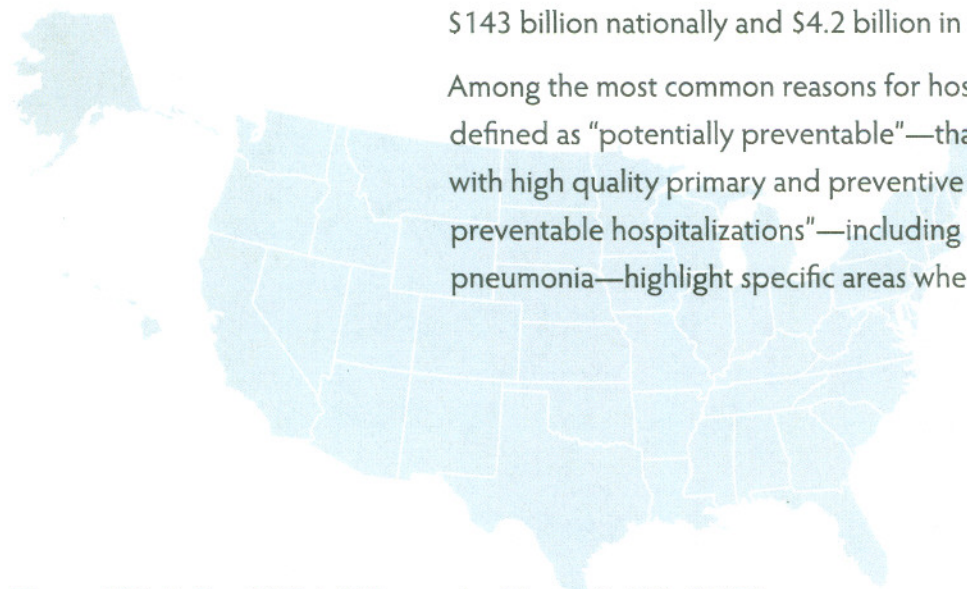
Source: Healthcare Cost and Utilization Project (HCUP)



## Total Spending—Highest Total Costs by Di

Heart disease accounted for the highest total spending of any condition—over \$143 billion nationally and \$4.2 billion in Michigan.

Among the most common reasons for hospitalization are conditions that are defined as “potentially preventable”—that is, those that may be preventable with high quality primary and preventive care. Thus, higher rates of “potentially preventable hospitalizations”—including hospitalizations for heart failure and pneumonia—highlight specific areas where targeted improvements can be made.



**Figure IB2.6:** Top 10 Total Charges by Diagnosis, U.S., 2007<sup>3</sup>

UNITED STATES				
Rank	Principal Diagnosis	Total Number of Discharges	Charges, \$ (mean)	Aggregate Bill (\$ Billions)
1	Coronary atherosclerosis (hardening of the heart arteries and other heart disease)	963,903	\$46,598	\$44.9
2	Liveborn	4,542,685	\$8,733	\$39.7
3	Septicemia (blood infection, except in labor)	675,391	\$57,543	\$38.9
4	Acute myocardial infarction (heart attack)	624,936	\$54,393	\$33.8
5	Osteoarthritis (degenerative joint disease)	814,934	\$41,210	\$33.6
6	Congestive heart failure, nonhypertensive	1,024,903	\$31,600	\$32.3
7	Complication of device, implant or graft	623,890	\$49,052	\$30.6
8	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	1,171,546	\$25,478	\$30.0
9	Spondylosis (back problems, disorders of intervertebral discs and bones in spinal column)	633,742	\$40,762	\$25.8
10	Respiratory failure, insufficiency, arrest (adult)	385,832	\$62,158	\$23.9



Additionally, conditions such as septicemia and back disorders are viewed as at least partially preventable, and are also among the top ten in spending in the U.S. and Michigan. Total hospital spending on back disorders alone was almost \$26 billion in the U.S. and \$819 million in Michigan.

Many who have coronary artery disease also have diabetes. Recent research estimates that medical expenditures for people with diabetes are more than twice as high as those without diabetes. In fact, spending on diabetes and associated complications accounted for approximately one in ten health care dollars spent in the U.S. in 2007.<sup>5</sup>

<sup>5</sup> Economic Costs of Diabetes in the U.S. in 2007, American Diabetes Association, 2008.

**Figure IB2.7: Top 10 Total Charges by Diagnosis, Michigan, 2007**

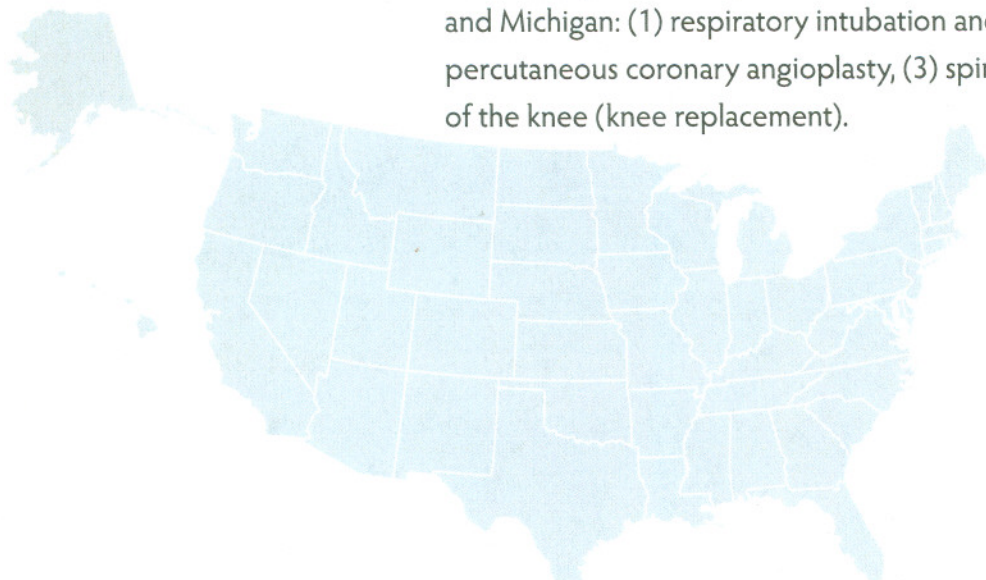
MICHIGAN				
Rank	Principal Diagnosis	Total Number of Discharges	Charges, \$ (mean)	Aggregate Bill (\$ Millions)
1	Coronary atherosclerosis (hardening of the heart arteries and other heart disease)	37,289	\$37,640	\$1,404
2	Septicemia (blood infection, except in labor)	28,878	\$39,783	\$1,149
3	Osteoarthritis	33,531	\$30,596	\$1,026
4	Acute myocardial infarction (heart attack)	24,606	\$41,614	\$1,024
5	Complication of device, implant or graft	24,992	\$39,834	\$996
6	Congestive heart failure, nonhypertensive	37,791	\$24,420	\$923
7	Liveborn	122,272	\$7,182	\$878
8	Spondylosis (back problems, disorders of intervertebral discs and bones in spinal column)	27,011	\$30,307	\$819
9	Respiratory failure, insufficiency, arrest (adult)	14,755	\$53,016	\$782
10	Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	37,333	\$18,324	\$684

Source: Healthcare Cost and Utilization Project (HCUP)



## Total Spending—Highest Total Costs by Proc

The four highest-cost inpatient procedures were the same for the U.S. and Michigan: (1) respiratory intubation and mechanical ventilation, (2) percutaneous coronary angioplasty, (3) spinal fusion, and (3) arthroplasty of the knee (knee replacement).

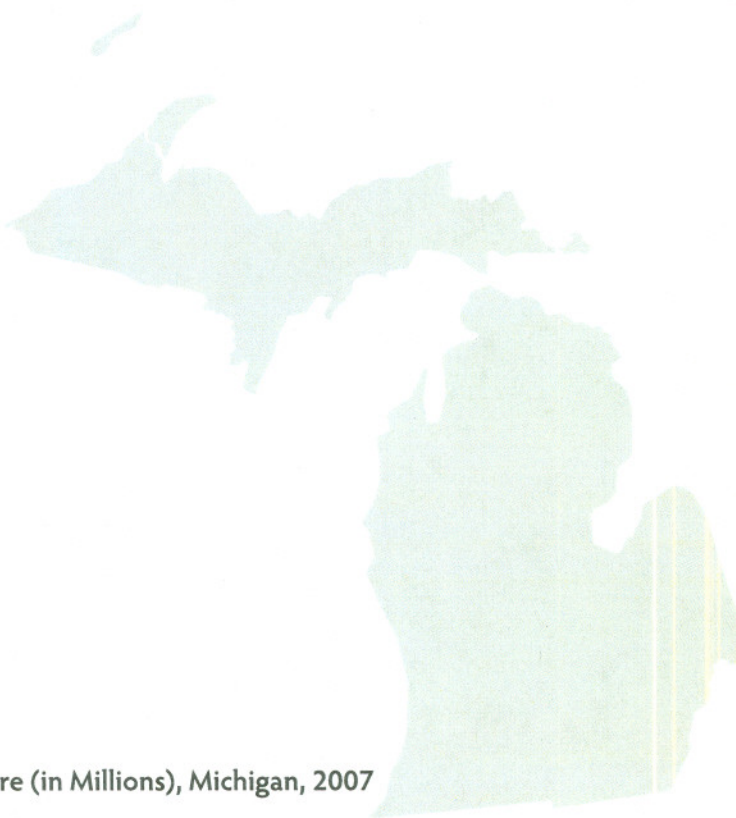


**Figure IB2.8: Top 10 Total Charges by Procedure (in Billions), U.S., 2007**

UNITED STATES				
Rank	Principal Diagnosis	Total Number of Discharges	Charges, \$ (mean)	Aggregate Charges "The National Bill" (\$ Billions)
1	Respiratory intubation and mechanical ventilation	754,168	\$73,415	\$55.0
2	Percutaneous coronary angioplasty (use of a balloon-tipped catheter to enlarge a narrowed artery)	668,036	\$51,460	\$34.4
3	Spinal fusion	350,754	\$74,672	\$26.2
4	Arthroplasty, knee	605,176	\$42,159	\$25.5
5	Other vascular catheterization, not heart	558,138	\$45,284	\$25.2
6	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/defibrillator	329,904	\$75,834	\$25.0
7	Cesarean section	1,479,640	\$15,872	\$23.5
8	Other operating room procedures on vessels other than head and neck	305,064	\$74,524	\$22.3
9	Coronary artery bypass graft (CABG, procedure to restore blood supply to the heart muscle)	198,669	\$112,377	\$22.3
10	Hip replacement, total and partial	402,060	\$47,757	\$19.2



Nine of the top ten highest total cost inpatient procedures were the same for the U.S. and for Michigan.



**Figure IB2.9: Top 10 Total Charges by Procedure (in Millions), Michigan, 2007**

MICHIGAN				
Rank	Principal Diagnosis	Total Number of Discharges	Charges, \$ (mean)	Aggregate Bill (\$ Millions)
1	Respiratory intubation and mechanical ventilation	24,814	\$57,406	\$1,424.5
2	Percutaneous coronary angioplasty (use of a balloon-tipped catheter to enlarge a narrowed artery)	29,316	\$40,694	\$1,193.0
3	Spinal fusion	16,094	\$51,951	\$836.1
4	Arthroplasty, knee	25,100	\$31,074	\$780.0
5	Other operating room procedures on vessels other than head and neck	13,190	\$57,065	\$752.7
6	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/defibrillator	10,586	\$70,408	\$745.3
7	Other vascular catheterization, not heart	21,493	\$32,403	\$696.4
8	Coronary artery bypass graft (CABG, procedure to restore blood supply to the heart muscle)	7,558	\$88,732	\$670.6
9	Hip replacement, total and partial	15,369	\$35,461	\$545.0
10	Upper gastrointestinal endoscopy, biopsy	24,191	\$22,137	\$535.5

Source: Healthcare Cost and Utilization Project (HCUP)



# Top Drugs by Number of Dispensed Prescriptions

Drug spending represented approximately 20 percent of total spending for health care in the U.S. and in Michigan (\$291 billion and \$11 billion respectively).

The most commonly prescribed drug in the U.S. and Michigan was the generic equivalent for Vicodin, a prescription narcotic pain medication. Generic Vicodin accounted for more than 124 million prescriptions in the U.S. and 5.1 million prescriptions in Michigan. While it is difficult to separate out the costs of pain management from other treatment costs, we know that drugs like Vicodin are associated with some of the high cost procedures listed in Figure IB2.8.

The second- and third-most prescribed medications in the U.S. and Michigan were ACE inhibitor Lisinopril and cholesterol-lowering Simvastatin (brand name Zocor).

**Fig IB2.10: Top drug names by number of dispensed prescriptions, 2008**

UNITED STATES		
Rank	Drug Name	Total Rx's (Millions)
1	Hydrocodone/acetaminophen	124.0
2	Lisinopril	75.5
3	Simvastatin	66.7
4	Levothyroxine Sod	61.4
5	Lipitor	57.9
6	Azithromycin	51.1
7	Amoxicillin	50.9
8	Hydrochlorothiazid	47.5
9	Amlodipine Besy	44.1
10	Furosemide	43.4
11	Metformin Hcl	41.6
12	Alprazolam	41.5
13	Atenolol	40.8
14	Metoprolol Succin	39.7
15	Omeprazole	35.1
Total U.S. Prescription Market		3,807.2

MICHIGAN		
Rank	Drug Name	Total Rx's (Millions)
1	Hydrocodone/acetaminophen	5.16
2	Lisinopril	2.37
3	Simvastatin	2.19
4	Amoxicillin	2.15
5	Levothyroxine	1.99
6	Ibuprofen (prescription)	1.64
7	Alprazolam	1.59
8	Azithromycin	1.58
9	Omeprazole	1.36
10	Metformin HCL	1.34
11	Atenolol	1.27
12	Hydrochlorothiazide	1.19
13	Furosemide	1.10
14	Lipitor	1.08
15	Amlodipine	1.06
Total for Michigan		116.4

Source: IMS National Sales Perspectives™



## Center for Healthcare Research & Transformation

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